



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,544	05/23/2005	Stefan Lindberg	1501-1257	4494
466	7590	05/12/2006	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			LE, JOHN H	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 05/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,544

Applicant(s)

LINDBERG ET AL.

Examiner

John H. Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Preliminary amendment (07/16/2004).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 16-22 is/are allowed.
- 6) ☐ Claim(s) 12 and 23-27 is/are rejected.
- 7) ☐ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/19/06, 07/16/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because Figures 1, 2, 10-12 and 15 need labeling (i.e. in words) so as to facilitate an understanding of the invention from the drawings.

Appropriate correction is required.

Oath/Declaration

2. The declaration is objected to because the "PCT FILED APPLICATION ENTERING NATIONAL STATE" section has not been completed. Appropriate correction is required.

Specification

3. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. Correction is required. See 37CFR 1.72.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The Brief Description of the Drawings is objected to because the description for Figure 7 indicates that it shows a physical embodiment of an apparatus but which embodiment of the apparatus is being referred to here. The Brief also refers to Figure 14 however there is not a Figure 14 but there are actually Figures 14A, 14B and 14C. Appropriate correction is required.

6. The listing of references in the specification (see page 26 of the specification) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper."

7. Page 26, lines 19-20, indicate that the preferred embodiments of the apparatus does not have any function for establishing whether steam leaks or not from a steam trap. However, it is not clear why here the invention is being described by what it is not as opposed to what the invention is. Appropriate explanation/correction is required.

8. Pages 28-29 of the specification refers to Figure 5 however there are actually Figures 5A-5D. Pages 36 and 47 of the specification refer to Figure 14 however there are actually Figures 14A-14C. Page 47, line 8, cites "Figur 15" which it appears should be "Figure 15". Page 48, line 29, cites "...add the use allowance i apparatus.." however was this intended to be "...add the use allowance in apparatus...". Appropriate correction is required.

Claim Objections

9. Claim 25, 27 are objected to because of the following informalities:

Claim 25, line 1, "The apparatus according to claim 26". Is the claim 25 dependent on claim 25?

Claim 27, line 1, "The apparatus according to claim 28". Is the claim 27 dependent on claim 28?

Appropriate correction is required.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-2 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 13 of copending Application No.

10/893,292 (US 2005/0049801 A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 13 of prior art anticipate claims 1-2 of instant application as follows:

<u>US Application No. 10/893,292</u>	<u>Instant application</u>
<p>1. An apparatus for analyzing the condition of a machine having a rotating shaft, comprising: <u>at least one input for receiving measurement data from a sensor for surveying a measuring point of the machine; said measurement data being dependent on rotation of said shaft</u>; data processing means for processing condition data dependent on said measurement data; said data processing means comprising means for performing a plurality of condition monitoring functions (F1, F2, Fn); and a logger for registering use of at least one of said condition monitoring functions (F1, F2,Fn).</p> <p><u>10. The apparatus according to claim 1, further comprising: a communication port (16); wherein said apparatus is adapted to be capable of delivering data indicative of said registered use on said communication port (16).</u></p>	<p>12. An apparatus for analysing the condition of a machine having a rotating shaft (8) <u>and a machine body with a measuring point (12)</u>, comprising: <u>a sensor (10) attachable on or at said measuring point (12) for generating measurement data dependent on rotation of said shaft</u>; data processing means for processing condition data dependent on said measurement data; said data processing means comprising means for performing a plurality of condition monitoring functions (F1, F2, Fn); a logger for registering use of at least one of said condition monitoring functions (F1, F2, Fn); a communication port (16) <u>coupled to said data processing means</u>; wherein said analysis apparatus is adapted <u>to deliver information</u> indicative of said registered use on said communication port (16);</p>

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Busch (USP 4,800,512).

Regarding claim 12, Busch teaches an apparatus for analyzing the condition of a machine having a rotating shaft and a machine body with a measuring point (e.g. Abstract, Col.2, lines 17-21), comprising: a sensor attachable on or at said measuring point (e.g. Col.3, line 61-Col.4, line 16) for generating measurement data dependent on said rotation of said shaft (e.g. Col.9, lines 17-23, Col.10, lines 27-39); data processing means for processing condition data dependent on said measurement data (e.g. Fig.5, Col.10, lines 27-68); said data processing means comprising means (switch 36) for performing a plurality of condition monitoring functions (e.g. Col.10, lines 40-58); and a logger for registering (memory program) use of at least one of said condition monitoring functions (e.g. Col.10, lines 40-58); a communication port (bus 48); wherein said apparatus is adapted to deliver information indicative of said registered use on said communication port (bus 48) (e.g. Col.8, lines 37-42).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Busch (USP 4,800,512) in view of Canada et al. (USP 5,633,811).

Regarding claim 23, Busch fails to teach said plurality of condition monitoring functions includes one or more functions selected from the group consisting of: vibration analysis.

Canada et al. teach said plurality of condition monitoring functions includes one or more functions selected from the group consisting of: vibration analysis (e.g. Col.6, lines 8-49, Col.7, lines Col.13, lines 55-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include said plurality of condition monitoring functions includes one or more functions selected from the group consisting of: vibration analysis as taught by Canada et al. in an apparatus for analyzing the condition of a machine having a rotating shaft of Busch for the purpose of providing an analyzer system having improved frequency analysis (Canada et al., Col.1, lines 5-8).

16. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busch (USP 4,800,512) in view of Lofall (USP 6,484,109).

Regarding claims 24-27, Busch fails to teach said plurality of condition monitoring functions includes a function for imbalance detection, a function for balancing, and a function for misalignment detection.

Lofall teaches said plurality of condition monitoring functions includes a function for imbalance detection (e.g. Col.26, lines 7-10), a function for balancing (e.g. Col.24, lines 8-12), and a function for misalignment detection (e.g. Col.26, lines 7-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include said plurality of condition monitoring functions includes a function for imbalance detection, a function for balancing, and a function for misalignment detection as taught by Lofall in an apparatus for analyzing the condition of a machine having a rotating shaft of Busch for the purpose of providing a diagnostic vibration data collector and analyzer in order to diagnose a condition of a machine under test (Lofall, Col.2, lines 14-19).

Allowable Subject Matter

17. Claims 1-11, 16-22 are allowed.

18. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, none of the prior art of record teaches or suggests the combination of a system for analysing the condition of a machine having a rotating shaft

(8) and a machine body with a measuring point (12); the system comprising a client part connectable to a communications network (18) for communication with a supplier part computer (20); said client part comprising: a sensor (10) attachable on or at said measuring point (12) for generating measurement data dependent on rotation of said shaft; an analysis apparatus (14) for analysing the condition of the machine on the basis of said measurement data; said analysis apparatus (14) having at least one input for receiving said measurement data; a data processing means for processing condition data dependent on said measurement data; said data processing means comprising means for performing a plurality of condition monitoring functions (F1, F2, Fn); and a logger for registering use of at least one of said condition monitoring functions (F1, F2, Fn) a communication port (16) coupled to said data processing means and connectable to said communications network (18) for communication with said supplier part computer (20); wherein said analysis apparatus is adapted to deliver information indicative of said registered use on said communication port (16) for delivery to said supplier part computer (20). It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 13, none of the prior art of record teaches or suggests the combination of an apparatus for analysing the condition of a machine having a rotating shaft (8) and a machine body with a measuring point (12), comprising: a sensor (10) attachable on or at said measuring point (12) for generating measurement data dependent on rotation of said shaft; data processing means for processing condition

Art Unit: 2863

data dependent on said measurement data; said data processing means comprising means for performing a plurality of condition monitoring functions (F1, F2, Fn); a logger for registering use of at least one of said condition monitoring functions (F1, F2, Fn) a communication port (16) coupled to said data processing means; wherein said analysis apparatus is adapted to deliver information indicative of said registered use on said communication port (16); and wherein said logger is adapted to register use of a first condition monitoring function a first rate; and said logger is adapted to register use a second condition monitoring function at a second rate. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Contact Information

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is 571 272 2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571 272 2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

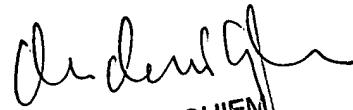
Art Unit: 2863

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

May 9, 2006



MICHAEL NGHIEM
PRIMARY EXAMINER